

In the Claims:

The following claims listing supercedes all prior listings.

1. (currently amended) A method of analyzing successive data sets, ~~in which method~~  
where each of the individual data sets comprise data elements which assign data values to  
spatial positions, the method comprising the steps of:

establishing

a local intensity variation  $[I(x,t)]$  ~~is established~~ from data values in successive data sets in  
corresponding spatial positions, and

localizing a region of interest

on the basis of the local intensity variation ~~a region of interest is localized~~ from one or  
more of the successive data sets, wherein

the local intensity variation in the region of interest is in conformity with a predetermined  
property.

2. (currently amended) A method of analyzing successive data sets as claimed in claim 1,  
wherein the step of establishing in which the local intensity variation is carried out  
~~established~~ for respective blocks of several data elements.

3. (currently amended) A method of analyzing successive data sets as claimed in claim 1,  
wherein the step of localizing includes localizing in which method  
the region of interest ~~is localized~~ on the basis of variations in the local intensity variation,  
notably on the basis of a time derivative  $\frac{\partial I(x,t)}{\partial t}$  of the local intensity variation.

4. (currently amended) A method of analyzing successive data sets as claimed in claim 3,  
wherein the step of localizing the region of interest includes in which method  
~~the region of interest is localized~~ by localizing blocks of data elements in which  
the variations in the local intensity variation are larger than a predetermined ceiling value  
and/or by localizing blocks of data elements in which the variations in the local intensity  
variation are smaller than a predetermined bottom value.

5. (currently amended) A method of analyzing successive data sets as claimed in claim 1, further including a step of classifying in which method data elements ~~are classified~~ in one or more individual data sets, the classification of the data elements in the relevant data set (sets) indicating whether the relevant data element belongs to the region of interest or not.

6. (currently amended) A method of analyzing successive data sets as claimed in claim 5, wherein the step of classifying includes performing in which method the classification is performed on the basis of a measure of similarity of the local intensity variation and a reference intensity variation in the region of interest.

7. (currently amended) A method of analyzing successive data sets as claimed in claim 5, wherein the step of classifying includes performing in which method the classification is performed on the basis of a correlation of the local intensity variation with a mean intensity variation in the region of interest.

8. (currently amended) A method of analyzing successive data sets as claimed in claim 1, further including a step of masking in which method parts with spatial gradients of data values ~~are masked~~ in individual data sets in as far as the modulus of the spatial gradients in the relevant parts exceeds a predetermined acceptable gradient modulus.

9. (currently amended) A method of analyzing successive data sets as claimed in claim 1, wherein said in which method the successive data sets are made to correspond to one another.

10. (currently amended) A method of analyzing successive data sets, comprising the steps of:  
in which method

~~\_\_\_\_\_localizing a plurality of regions of interest is localized on the basis of the~~  
~~local intensity variation, wherein the local intensity variation in said regions of interest~~  
~~being in conformity with a predetermined property, and~~  
~~\_\_\_\_\_determining~~  
maximum intensity projections (MIPs) ~~are determined~~ for the respective regions of  
interest, and  
~~\_\_\_\_\_forming~~  
a feature image ~~is formed~~ from differences between said maximum intensity projections.

11. (currently amended) A method of analyzing successive data sets as claimed in claim 10, ~~wherein in which method~~ a center of the region of interest is determined in the feature image.

12. (currently amended) A method of analyzing successive data sets as claimed in claim 11, ~~wherein in which method~~ the feature image is transformed to pole co-ordinates with said center as the origin, and -a boundary of the region of interest is localized in said transformed feature image.

13. (currently amended) A method as claimed in claim 3, ~~wherein in which method~~ a mask is derived from the time derivative of the local intensity variation for an individual data set, and

the region of interest is segmented from the relevant data set by means of the mask.

14. (currently amended) A method as claimed in claim 13, ~~wherein in which method~~ the mask is derived by applying a threshold filter to the time derivative of the local intensity variation for the relevant data set.

15. (currently amended) A method as claimed in claim 3, ~~wherein in which method~~ a spatial distribution of the time derivative of the local intensity variation is reproduced for an individual data set.

16. (currently amended) An analysis system for analyzing successive data sets, wherein  
~~in which the~~ individual data sets comprise data elements which assign data values to  
spatial positions, comprising:

                      
~~which analysis system is arranged to~~

                     means to establish a local intensity variation  $[I(x,t)]$  from data values in  
successive data sets in corresponding spatial positions, and

                     means for localizing,

~~on the basis of the local intensity variation~~ a region of interest is localized from one or  
more of the successive data sets on the basis of the local intensity variation, wherein  
the local intensity variation in the region of interest is in conformity with a predetermined  
property.

17. (currently amended) A computer-readable medium for storing a set of computer  
instructions, which instructions are capable of implementing a method of ~~program for~~  
analyzing successive data sets, including  
~~in which the~~ individual data sets with ~~comprise~~ data elements that ~~which~~ assign data values  
to spatial positions, comprising:

~~which computer system comprises instructions for~~

                     establishing a local intensity variation  $[I(x,t)]$  from data values in  
successive data sets in corresponding spatial positions, and

-                      localizing, on the basis of the local intensity variation, a region of interest  
from one or more of the successive data sets, wherein  
the local intensity variation in the region of interest being in conformity with a  
predetermined property.